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IDEAS ABOUT PICTURES.

PAINTING never appears to us so well employed as when illustrating and enforcing some great moral truth. This sentiment lately recurred to us with much force on chancing to meet a copy of Callot's *Miseries of War*. The peculiar merits of Callot, as a painter of minute figures, are familiar to those who interest themselves in art; but the artist and the work just named deserve to be known to a much wider circle. Callot was born at Nancy in Lorrain, in 1593, and, impelled by nature to be a painter, broke away at twelve years of age from his father's house, and went with a party of gypsies to Italy, where he studied under the patronage of various individuals of rank, to whom his talents had become known. Within a short life—he died at forty-three—he produced about four hundred distinct works, chiefly representing battles, processions, festivals, and other scenes involving numerous figures. But, though thus prolific, his pencil was not venal: when requested by Louis XIII. to paint the taking of his native town, his patriotic spirit would not suffer him to perpetuate the memory of his countrymen's calamities, and he declared that he would rather cut off his thumb, than so employ his hand. From a comparison of dates, it is not unlikely that this circumstance was what induced him to prepare the series of drawings which were engraved by his friend Israel, in 1633, under the title of "*Les Misères et les Malheurs de la Guerre*." The object of these drawings evidently is to inspire a horror for the details of war, and even to direct some virtuous indignation at that ambition of rulers, from which war so often springs. The object is pursued much less covertly than might be expected of a book published at such a time, and under such a government, "*avec privilege du Roy*," as the title-page expresses it. On the title itself, two kings are represented as arming and advancing to meet each other, with their generals and pages behind them, and all the paraphernalia of war, cannon, swords, spears, shields, and also *crownæ*, lying around. But when great and bad institutions are in security, they will allow that to be thundered against them, which, at another time, they cannot endure to be whispered. The moral satire of Callot would probably appear, in the France of the reign of Louis XIII., as only a good jest, and be smiled at accordingly. It was one of that description of satires which prophesy a future state of public feeling adapted for their reception. Like letters written in invisible ink, it was calculated to remain unread, in its full and true meaning at least, until shone upon by a light different from that under which it had been composed. That light is only now beginning to shine.

The first picture after the engraved title, gives the army under muster before a great fortress. At one corner, recruits are in the process of being enlisted by a person who uses a drum-head as his desk; at another, some high official persons are giving and receiving large sums, in the metal which, as a poetical motto below truly remarks, makes both peace and war. The great body of the army is drawn up in masses in the centre. All is here smart, gay, and animating. No unhandsome stains of travel or of blood as yet dim the new lustre of the ranks. The costume is also of a kind to interest the imagination. The officers are gallantly attired in large Spanish hats with feathers—embroidered doublets, and loose trunk hose, buttoned down the thigh—flowing sashes, and elegant buskin-like boots—the attire of an age which, as Scott somewhere says, reflected the setting rays of chivalry. The figures have all the strutting sprightliness of the French, and, considering their small size, are delineated with remarkable spirit and expression. The second plate re-

presents a battle, in which, as might be expected, there is much more of personal combating than is common now-a-days. But the artist, though he has strewn the ground with a goodly number of killed and wounded warriors, as well as horses and thrown-away armour, seems to have felt, that, in the mere horrors of a battle, which most people can easily imagine, and are sufficiently familiar with, the least important part of his subject lay. He immediately proceeds to bring home military mischief to the homes of the people. His third plate represents a party of drunken soldiers bursting out of a country inn, not only without paying their host, but carrying off a booty of clothes and furniture, the poor people of the house flying after them in distraction, while another party, possibly belonging to the opposite force, meets them in the teeth, and strikes one or two to the earth. But this scene is trivial compared with that of the fourth plate, which gives us the interior of a large hall or kitchen in a country house, enduring the pillage of an infuriated soldiery. Some are stabbing the male members of the family on the ground; others are seizing the women by their wildly streaming hair. One party has hung a man over a fire by the heels, probably to make him confess the seat of concealed treasure. Several are ransacking the house for provisions, and preparing, amidst the groans and shrieks of their miserable fellow-creatures, for a selfish feast. The succeeding picture gives a burning village, with the inhabitants led away as prisoners, and their cattle and goods in the hands of their captors. Another shows a square in the centre of a town, with a handsome church burning, and its valuables pillaged by the same violent hands. In the seventh, the demoralising effects of war upon its own votaries are illustrated, for a small party on a march is represented in the act of attacking a diligence or waggon, and robbing and murdering the travellers; while the motto informs us that they are accustomed thus to act as banditti, having nothing better to do with their bloody arms. In the next print, however, they are seen as bound felons under the care of the provost-marshal, and in the subsequent four, we see them suffering the various punishments due to their crimes. In one, a wretch is suspended by the arms from a tall gibbet, in the centre of a large market-place, while one or two others are preparing to submit to the same torture. In another, above twenty are hanging by the neck from a large tree in the midst of the assembled army, while the hangman and priest are preparing others to add to the number. In a third, a miserable sinner is shot at a stake, with two companions at his feet, who have just submitted to the same fate. The fourth represents a few of those who had despoiled and robbed the church, burnt at a stake, their crime demanding, according to the ideas of that age, a more signal punishment. Here, too, we have one of those slight, almost accidental, touches, with which Hogarth works such effects—a man digging a hole near the stake, apparently for the remains of the yet living but suffering criminal. The last of these penal scenes is the breaking of a man on the wheel. In the fourteenth print of the entire series, a multitude of maimed soldiers, discharged at the conclusion of the war, are seen begging from door to door; a scene of misery much aggravated in the next ensuing picture, where some are represented as actually dying of want by the wayside—but more so still in the next again, which shows this miserable mendicant wreck of the gay army originally mustered, fallen upon by the enraged peasantry, on account of their thieving, and massacred outright with clubs, flails, and fire-arms. There is just one more print, and in it the scene is suddenly and strikingly changed.

After all the miseries and wickedness seen flowing from war, chiefly through its inferior agents, we here find the commanders brought before the king in full court, to receive the honours due to their bravery and skill. A more emphatic climax to the series could not have been devised.

Such is Callot's "*Miseries and Mishaps of War*," a group of pictures telling a great moral truth with very great force, and, at the same time, admirable as productions of art, for it is impossible to paint with more natural truth and spirit than this Frenchman of the seventeenth century. The artist of our own country who most resembles Callot, is Hogarth. With a good deal of vulgarity substituted for the grace of the Frenchman, he had the same moral power, and employed his pencil to equally good effect. He produced his first great work, "*the Harlot's Progress*," about 1733, and no productions of the pencil or graver ever made before, and scarcely since, so strong an impression on the public. That at such a time twelve hundred persons should have subscribed for an expensive series of prints by a native and obscure artist, is astonishing. His "*Rake's Progress*," "*Idle and Indolent Apprentices*," and "*Marriage-a-la-Mode*," which followed in succession, were not less successful, and show strikingly, that, though the age was wretchedly vicious, as the prints themselves show, and brutally so in many respects, yet there is a natural morality in the breasts of the mass of mankind, which springs awake when the proper string is touched, and rises in might, above local and temporary habits, to vindicate the innate and inalienable majesty of the human character. It surely says something for mankind that Hogarth was so highly appreciated in his own day, and that his fame has never since been in the least dimmed. There have not been fewer, we believe, than six republications of his works within the present century; and amongst all the artists to which the country has since given birth, is there any one whose fame is of a more enviable kind? To what can we attribute this great and continuing reputation, but to the fact that Hogarth consulted nature, and brought to the bar of the human heart some things which it could not view without emotions which gave it pleasure?

We are much disposed to think that art might be employed advantageously on many moral subjects after the manner of Callot and Hogarth. We presume, of course, that, in such a case, the engraver should also be called into play, for, without a means of appeal to the public at large, there can be no right exercise of the painter's faculties. We are the more inclined to be confident in our opinion, as, in our recollections of the history of painting, it occurs to us that the greatest triumphs have been made in those cases where the higher feelings were addressed. It was these feelings surely, though not under the best direction, that the great fathers of the Italian school sought to gratify, in those magnificent specimens of their art which adorn the churches of their native land. Within the range of history and biography there are thousands of things, sublime, affecting, romantic, which might be made the subjects of effective pictures. Amidst even the sordid cares of ordinary life, there frequently occur situations which call forth the loftiest aspirations, and excite the deepest sympathies, of our nature. If we were required to point out a historical subject, we should refer to the French Revolution. A series of pictures, displaying the progress of that phenomenon, with all the aids which could be obtained from the portraiture of costume, scenery, and the faces of important actors—something to realise again those scenes of terrible and wide-sweeping passion, the awful vengeance of an outraged nation, and hang them up for the warning of all future governors and nations—would come upon the world like the past-recreating fictions of Scott. In biography, what nobler subject could be found than

Franklin? Let us please our own fancy with the sketch of a series on-the-life of this great man. The first picture might represent him as a child sporting before his father's door in Boston, in view of his parents and their friends, a group of primitive and venerable New-Englanders. In the second, we would have him depicted, in his seventeenth year, just arrived in Philadelphia, and walking through the streets of that town, with his pockets filled with shirts and stockings, and one loaf under his arm, while he was eating from another, in view of the maiden who afterwards became his wife. Scene third should bring him to the year 1725, the nineteenth of his life, and exhibit him working as a pressman in Watt's printing-office, Lincoln's-Inn-Fields. Three years later, we should have him back to Philadelphia, set up in business for himself, and engaged in wheeling home his paper for printing in a wheelbarrow. In 1736, his thirtieth year, he should appear as the respected citizen, acting as clerk to the House of Assembly of the province. Again, in 1744, we should see him establishing the Philosophical Society, and, eight years later, employed with his son in his celebrated electrical experiments. The next picture might place him (1764) before the bar of the House of Commons, in the act of giving evidence respecting the discontent of his countrymen. In 1771, he was again in London, and visited the old printing-office in Lincoln's-Inn-Fields, where he treated the men working at his press: this would form an interesting member of the series. Two years later, he should appear in his plain suit of Manchester velvet, attending a meeting of the British Privy Council on the subject of Governor Hutchinson's letters, while Solicitor-General Wedderburn stigmatizes him as a felon; he leaning unmoved on the chimney-piece. In 1775, we should place him at the bar of the House of Lords, while Chatham, now his friend, brings forward his plan of conciliation with the colonists, and points out Franklin as one whom all Europe has reason to honour. Next year, he should be seen in the act of affixing his name to the Declaration of Independence in Congress. Now comes the period of his highest triumphs. The year 1778 would represent the son of the dyer of Boston introduced in the gallery of Versailles, by the Count de Vergennes, to Louis XVI. of France, as the American minister for foreign affairs, commissioned to form an alliance with that monarch. He wears the same dress he had worn when stigmatized by the puny Wedderburn; the plainness of his appearance, his age, his philosophic reputation, conspire to render him an object of extreme interest. Next, in 1785, after he has in the meantime acted for several years as American plenipotentiary, we should have him received with enthusiasm at Philadelphia, and carried in triumphal procession to his own house. Finally, the superb public funeral decree to him at his death, as one of the most illustrious benefactors of his country, would crown the whole.

Though we have spoken of these subjects, we are not prepossessed in their favour. There are numberless others equally well or perhaps better fitted to make an impression on the public. What we are anxious for, is to stir up artists to reflect how far their present courses are calculated to produce the effect which they aim at. If we consider the present state of art, we shall be aware that the labourers are many (almost every provincial city having its own exhibition), but that the result in public gratification is remarkably small. It is indeed positively wearisome to go into one annual exhibition after another, and find still the same everlasting round of common-places—scenes from the Waverley novels or from Byron—ideal beauties, as tame as dolls—conversation pieces which do not tell—and whimsicalities which nobody laughs at. Artists appear even more wedded to certain old-established ideas than the poets to their loves and doves. They make runs upon ideas or sets of ideas, and do not abandon them till they are worried out of all spirit and likelihood. Their range of reading, and, what is of more consequence, their range of observation of actual nature, appear in general extremely limited. Of the leading tendency of public intellect and feeling in their own age, they are totally unaware. The starting of a new kind of appeal to human sympathies is an era amongst them. Perhaps all this is in a great measure owing to the labour and thought which the mere acquisition of their art demands; but it is at the same time clear, that, if a cavalry officer were to require a lifetime to learn to sit on his horse, he never could be fit to act as a soldier in battle. We think, then, with all deference to other authorities, that the indifference shown by the public towards art, which is so often complained of by artists, may be easily accounted for, without supposing that it is a natural and unalterable characteristic of the human bosom.

If painters were to consider it an equally essential part of their education to cultivate the general powers of their minds, and to acquire extensive information, we are persuaded that they would find themselves in a condition much better qualified to attract public attention. Any individual possessing, in addition to these qualifications, a high moral endowment, and enlarged sympathies, could not fail, we think, to strike out new paths for himself, and produce works which the world would not willingly see die.

As far as we recollect, Wilkie is the only painter in the present day who has presented the world with a series of pictures, the subjects of which appeal to the feelings of all. When his pictures—we mean those illustrative of scenes in humble rural life, as

"Reading the Will," "The Penny Wedding," and "Distressing for Rent"—were hung up in Somerset House, the crowd of spectators was so great, that individuals had to wait their turn to get forward to look at them. Wilkie went to Italy to improve himself. When he returned, he hung up a picture in the same exhibition room—a "Washing of the Feet," or some such Scripture piece. It was extolled by the leaders of taste as remarkably fine. Perhaps it was, but nobody went to see it. What do circumstances like this teach? Why, that painters ought to adhere to nature, and appeal to the feelings of the masses. Possibly it may be answered that painters can work only as they are employed—that they cannot afford to devote their time and talents to works of art such as those we allude to. Be it so. But in this case they must just content themselves with that limited remuneration and limited popularity which the pictures they produce can give them. It would gratify us much to see painters emancipate themselves from the thrall of schools and corporations and patrons. At this moment they are in a position very much resembling that of authors a hundred years since, when no man dared to write a book till he got a nobleman to patronise it. Let painters follow the example of authors—paint for the masses, not for the units, and we have no doubt of the success which would attend their efforts. England abounds in talent, but how woefully is it misdirected!

THE SQUIRE OF CRANBERRY HATCH,

AN ENGLISH STORY.

SOME years ago there came to reside in the neighbourhood of the village of Cranberry Hatch, in Bedfordshire, one of those strange characters whose tempers, though perhaps originally good, have been spoiled in India, whither they had gone in search of fortune, and who return in middle life to England, apparently with the benevolent intention of venting their crotchetts humours on poor relations, and generally all persons who have the misfortune to become acquainted with them.

Mr Samuel Buckley, as the present returned Old Indian was named, resembled others of his class; had a yellow leathery complexion, was immensely rich, very pure proud, and exceedingly desirous of rendering himself conspicuous in the society amidst which he took up his residence—in fact, he was anxious to take the lead in the district as a public man. In this object of his ambition, however, he found himself completely circumvented. Every little district in Britain already possesses its well-recognised object of worship, in the form of some wealthy landed proprietor, and Cranberry Hatch was not without its divinity. Lord Martinvale was its great man. He was looked up to as a leader and patron on all occasions, and it therefore defied all Squire Buckley's ingenuity, backed by his enormous wealth, to dislodge him from his place in the public estimation. But more of this anon.

The squire, finding himself a good deal nonplussed in his efforts at rendering himself the ruling power in the village and its neighbourhood, abandoned himself to the management of his own family, over whom he exercised an unchallenged sway. His family, to be sure, was not very numerous, but its members made excellent subjects of an arbitrary government. They consisted of an elderly tamed-down housekeeper—one of those poor women who have endured a world of misfortunes, and are glad to put up with any kind of usage for the sake of house-room—two black servants, and a gentle young creature, to whom we may, with propriety, give the title of a white slave, for such she really was, in consequence of the caprices of her uncle.

Fanny Lee was the only child of Squire Buckley's sister, a lady who had forfeited her brother's favour by marrying a half-pay subaltern in preference to accompanying him to India, ministering to his comforts, submitting to his whims and fancies, and receiving the wages of incessant revilings, in return for her services. She did not long survive the birth of her daughter. Her husband married again, and becoming the father of a numerous offspring, did not consider himself justified in rejecting the proposal which his wealthy brother-in-law made, on returning to England, of taking Fanny into his own family.

Mr Lee, it is true, did not greatly approve of the manner in which the brother of his deceased wife conceded his request, if request it might be called which amounted to a demand, of his child as a long dormant right of his own, which it had at length pleased him to reclaim. The feelings of the father, and the spirit of the gentleman, alike revolted at the offensive tone of superiority assumed on this occasion by the purse-proud man, who looked down on him and his wife with undisguised contempt; and he felt, in the first instance, disposed to return a decided negative to his insolent brother-in-law; but then he remembered that Buckley was a childless old bachelor, and Fanny, as his nearest of kin, would in all probability become the heiress of all his wealth—wealth that almost exceeded his powers of calculation, and which might be wholly alienated if he were offended. The anxious father looked round with painful emotion on his unprovided little ones, and thought that Fanny would never suffer them to want, if he became the possessor of affluence;

understanding the secret conviction that the change would not be for the present happiness of his daughter, however her future prospects might be improved by it, he suffered her to depart with apparent satisfaction.

Fanny Lee was at that time a blooming girl of sixteen, very pretty, an adept in the craft of pie and pudding making, a good needlewoman and accountant, and an excellent nurse; but she did not possess one accomplishment. She could sing like a lark, it is true, but her voice was perfectly uncultivated, for she knew not a note of music, and had no idea of acquired graces of any kind. Every movement of her heart was fresh, joyous, and unsophisticated. She expressed all her feelings without disguise, laughed when she was merry, and wept when she was sad, without regarding the presence of any one, and was wont, in the unrestrained freedom of her heart, to say she should do the same even in the company of the king. Alas! the restraints which the presence of royalty would have rendered necessary, were nothing at all in comparison with those which the squire imposed; and he was wretched of a temper so capricious and uncertain, that, though a repetition of the same offence was sure to bring down an outpouring of the heaviest vial of his wrath, it was hopeless to expect him to be pleased twice with the same thing.

The assistance of masters, aided by natural talent, and persevering application, soon enabled Fanny to go through the usual routine of dancing, music, and drawing, with credit to herself; and she made a considerable progress in the French and Italian languages. Yet there was no satisfying her uncle, who, though he was not the slightest judge of such matters, wearied her with his incessant reproofs, and criticisms on her various attempts and performances in these things; and when he had mortified her to tears, it was his pleasure to revile her for weeping. Nothing that she did was right in his eyes, nor would he allow that any thing was ever well intended. Her mirth was vulgar levity, her gravity gloom, her silence sullenness, her conversation a bore, her sadness discontent and ingratitude, and her patient endurance the thing he hated worse than all—apathy, for it afforded him no excuse for tormenting her.

I will not attempt to describe the home-sickness, and yearning of heart after the beloved companions of her childhood, and the weariness and vexation of spirit with which the heiress-presumptive of the rich Mr. Buckley was oppressed during the first four years of her residence beneath his inhospitable roof, where she was the nominal mistress, but, in reality, the most miserable slave that ever ate the bitter bread of bondage. She was, however, subdued to the yoke. The buoyant spirits of youth, which in the early days of her probation prompted her to occasional acts of resistance to her tyrant's will, were broken and gone, and she was reduced to a passive and uncomplaining, but still sensitive victim.

When she had completed her twentieth year, a new subject for aggravation suggested itself to the spleenetic mind of her uncle—a subject on which he concluded the pride of a young female would be very assailable. She had no lover, nor had any gentleman ever made proposals of marriage to her. This circumstance was in truth a far keener wound to his self-esteem than to the vanity of a creature so meek and unpretending as Fanny Lee. He was mortified that no one had been sufficiently allured by the report of his wealth and consequence, to be ambitious of courting his alliance; and he assured Fanny, that, had she been any thing but what she was, he should have been beset by half the gentlemen in the county, in their anxiety to form a connection with him. She began, therefore, to cherish a wish on a subject which had never before occupied a serious thought. In a word, she anxiously desired to get married, for no wiser reason than that she might avoid the epithet of old maid, the dread of which had rendered many a happy young one a wretched wife.

At this perilous crisis, a gentleman of family and fortune, rather plain in his person, formal in his manners, and verging on the period of ancient bachelorthood, purchased an estate in the neighbourhood; and having seen Fanny Lee at the parish church, and hearing that she was the reputed heiress of the rich Mr. Buckley, he obtained an introduction to this formidable personage, whose good will he so successfully cultivated, that he was one day, without any previous preparation, presented to Mr. Buckley's niece as "his friend, and her future husband." Four years ago, the light-hearted careless Fanny would have shuddered at such an intimation, and probably expressed unfeigned abhorrence, regardless of all consequences. Now, she only looked demure, and curtailed silently, as she thought, "So, I am to have a husband, after all;" crossed her mind, putting all the rhe-and-wormwood anticipations that had lately clouded her fancy, to the flight. Yet it can scarcely be said that these sombre images were succeeded by visions of a more agreeable character, when she glanced at her spouse elect, and strove to picture to herself the charms of a conjugal life with Mr. Brownlow.

Something of a dissident tone appeared rising to her lips, as a feeling of revulsion stole over her young heart; but then, the alternative of pinning away the residue of her days in forlorn spinsterhood with her uncle, rose in gloomy perspective before her; and she decided, that, of the two evils, it would be more tolerable to become the wife of the one old bachelor, than to remain the domestic slave of the other, especially as Mr. Brownlow was a civil, quiet-tempered man, who professed himself very desirous of promoting her happiness. As for the sentiment of love, Fanny had indeed seen it occasionally mentioned in the few novels she had perused by stealth, but of its real meaning she

had not formed the slightest idea; and Mr Brownlow found her heart perfectly free from any pre-engaging interest, and remaining like a spare room, vacant for the reception of lumbers.

Charmed with this very satisfactory observation, and delighted with the meekness and polite attention with which his affianced treated him, Mr Brownlow became much attached to her, and strove in every way to render himself agreeable to her. He made great improvements in his house and grounds, consulting her taste in every particular, which Fanny, who never before was aware that she had a taste, regarded as a flattering mark of his esteem. She felt proportionally grateful, and even began to contemplate the approaching change in her condition with some degree of complacency.

Things had now arrived in such a train of forwardness, that settlements were drawn, carriages and furniture purchased, and new bridal garments talked of, when Mr Buckley and the bridegroom met differed in opinion at a county meeting respecting the expediency of bringing a projected railway through that district; and the dispute became so warm, that Mr Buckley assured his opponent "that he would sooner follow his niece to the grave, than see her wife." In conclusion, he peremptorily forbade Fanny "ever to think of that empty-headed old coxcomb Brownlow as a husband again."

Obedience to this mandate cost a very trifling effort. Fanny was perfectly resigned, and her uncle, as a mark of his approval of her dutiful acquiescence in his determination, told her she was a good girl, and he would look out for a better match for her. For a whole month after this affair, he treated her with such unwonted indulgence, that she regarded the change as almost miraculous. By degrees, however, he relapsed into his former spleenetic humour, and before the year had expired, actually began once more to annoy her with insulting remarks on her maiden estate, no second suitor having been sufficiently venturesome to encounter the surly dragon by whom the hapless damsel was guarded, while the universal dislike which his manners and conduct excited, caused them to remain in a state of almost unbroken solitude.

At length a dissolution of parliament, followed by a general election, put the whole county into a state of excitement, which enlivened even the stagnating temperament of Fanny's narrow circle, and brought an unlooked-for change of feeling within her bosom. A young baronet, professing himself an ardent advocate for reform, offered himself as a candidate for the county, in opposition to Lord Martinvale's son, and the other Tory member who had represented the county in the last parliament; and Mr Buckley, who exulted in the opportunity of making his noble neighbour feel that his animosity, backed as it was by the influence of a full purse, was something in the scale of a contested election, formed an alliance, offensive and defensive, with Sir Frederick Marden. The young baronet opened the commencement ball with Miss Lee, and the next day made proposals of marriage to her, with the entire approbation of her rich uncle, who pledged himself to give her a portion sufficient to cover a blank escutcheon with golden blazonry.

As for Fanny, her poor head was well nigh struck at the intoxicating prospect thus unexpectedly opened before her, of becoming the wife of the handsomest and most elegant young man she had ever seen, a man of rank withal, who was moreover the most passionate of lovers. He assured her he could brook no delays, but must insist on the superlative felicity of calling her his own as soon as the election should be decided in his favour.

Fanny, of course, offered no very serious objections to such an arrangement, which had already received the important sanction of Mr Buckley's unqualified approbation. He was, indeed, the person who appeared to derive the greatest pleasure of all from the approaching alliance. His satisfaction even betrayed him into various unwonted levities, very contrary to his usual sour solemnity. He winked at Fanny whenever Sir Frederick's name was mentioned, proposed their united health at his own table, called them "the lovers," and sometimes even departed so far from his wonted pomposo formality of deportment, as to slap her on the back, and salute her by the title of "My Lady Marden."

Sir Frederick's name stood at the head of the poll at the close of the first day's contest, and there were no bounds to the exultation of the squire. On the second, the heir of Lord Martinvale had obtained the precedence of his rival candidates, but Sir Frederick stood next in order. On the third and fourth days he was at the bottom of the poll, on the fifth he was three in advance of Sir George Burbage, on the sixth they were precisely equal, on the seventh there was a rupture between the Tory candidates on the subject of the Catholic emancipation, on which an immediate coalition took place between the heir of Martinvale and Sir Frederick Marden, who thus obtained so considerable a majority over Sir George, that the latter considered it useless to keep the poll open any longer. By this arrangement, Sir Frederick Marden gained his election, but lost his wife. Mr Buckley, whose engrossing desire it had been to throw Mr Martinvale out from the representation of his native county, was so exasperated at his protégé having consented to the amicable arrangement which secured their mutual return as knights of the shire, that he forbade his niece ever to think of Sir Frederick Marden again, and forthwith penned a letter to that gentleman, rejecting his alliance in a manner every way insulting to his feelings as a man of rank and honour. Sir Frederick replied to this impertinence by laying his cane across the shoulders of Spike Buckley the next time he encountered him in public, thus rendering the breach between them irreparable.

Mr Buckley entered an action of battery and assault against Sir Frederick, and obtained a verdict in his favour, with the award of one farthing damages. Fanny, meanwhile, remained in a manner stunned and stupefied by the unexpected explosion which had overthrown all her brilliant matrimonial anticipations. It was some days, indeed, before she appeared fully convinced that she was not under the influence of a frightful dream. The news of Sir Frederick's approaching marriage to a niece of Lady Martinvale, followed by a more than ordinary access of ill humour on the part of her uncle, sufficiently awakened her to the direful reality of all that had happened, and certainly the six months that succeeded these events might be reckoned the most dreary of her cheerless existence. Not that Fanny could have been said to love Sir Frederick Marden, her acquaintance with him had been of too brief and general a nature for that; but she had greatly admired and been deeply interested in him. He was the most accomplished young man she had ever seen, and the only one who had treated her with the gallantry of a youthful lover, and she had contemplated the prospect of becoming his wife with feelings of proud delight; but as Sir Frederick was now the husband of another, duty forbade her regarding him in any other light, and it was not the least bitter of her trials that she was constantly reminded of him by the brutal taunts of her uncle. Time, however, which heals the deepest wounds, rendered the smart of hers less acute. Years passed away, and her uncle, who had long been afflicted with a painful chronic disease which frequently confined him to his chamber, now suffered so much from the increasing violence of its attacks, that he resolved to try the benefit of the Cheltenham waters, and accordingly visited that place, accompanied by Fanny, who was so necessary to his comforts that he relied upon her for every thing, and seldom permitted her to stir from his side.

At Cheltenham, Fanny became acquainted with a widow lady, and her son, a young clercyman, who had just been admitted into orders. Less gifted by fortune than by nature,

Nor wealth nor power had he.

Wisdom and worth were all he had;

and in the society of Henry Herbert, Fanny Lee soon learned to regard these as all to her.

A new and powerful interest was now awakened in her heart, and she had every reason to believe that she was not indifferent to the object of her preference, when her uncle, with his usual caprice, one morning while she was administering his medicine to him, poured forth a torrent of peevish vituperation against Cheltenham, its springs, lodgings, company, and inhabitants, and bade her hold herself in readiness to depart with him the following morning to Bath.

"So soon?" demanded Fanny, in a faltering voice. "Have I not said it?" responded Mr Buckley, in a tone that convinced her his determination was unalterable.

The next morning they left Cheltenham at so early an hour as to preclude the possibility of a farewell interview with Henry Herbert. It would be tedious to enter into the particulars of Fanny's sojourn at Bath, and the other places which Mr Buckley visited, in a vain pursuit of that health which his own restless irritability of temper had mainly contributed to banish. Suffice it to say, that, after an absence of many months, he returned to his home a confirmed valetudinarian, and, if possible, in a worse humour than when he left it.

Some changes had taken place during his absence; among the rest, the curate had been presented with a living, and had gone to take possession of his benefice. Mr Buckley, who hated every creature in the parish, expressed himself charmed at his departure, marvelled at the folly of the patron who had promoted him to a living, and finally visited the church on the following Sunday, to honour his successor with his presence. He was accompanied by Fanny, who, as his niece, he imagined, would be considered as a personage of importance also by the new curate. The interest with which Fanny was certainly beheld by the young minister, was, however, by no means a reflection from the superior splendour of her rich uncle, for that minister was Henry Herbert.

It is needless to enter into the detail of Fanny's emotions at the recognition; it was mutually delightful to both; even the great Mr Buckley appeared to derive satisfaction from the circumstance of the curate being a stranger to every member of the congregation, himself and his niece excepted; and he immediately formed the magnanimous resolve of patronising him, in the hope of securing his exclusive attention to himself. Accordingly, he was profuse of his invitations, both to him and his mother, and was charmed by observing that both appeared to regard his house as infinitely more attractive than that of any of his neighbours. It never occurred to him in his blind egotism that his gentle and lovely niece might be the magnet that drew them thither, nor was it till a most perfect and lover-like understanding subsisted between Fanny and Herbert, that he was at all aware of what had been going on for months before his eyes. To this he was unexpectedly awakened at a public dinner, at which he was lauding the superiority of the new curate over his predecessor, especially in the discrimination he displayed in his choice of society. "Mr Herbert is a frequent visitor at your house, indeed," observed one of the gentlemen, pointedly. "I am happy to say he is, and always a welcome guest," returned Mr Buckley; "I consider it a point of duty on my part to encourage persons of taste and talent whenever I am so fortunate as to encounter them, and Mr Herbert has given decided proofs of both in many ways, and the congeniality of his sentiments with my own is evident from the almost exclusive manner in which he has confined his visits to my house." "Your house may probably afford considerable attractions to the young gentleman," rejoined one of the company. "I flatter myself it does," replied Mr Buckley. "In the person of your amiable niece, or public report is erroneous on the motives of Mr Herbert's visits," said Mr Brownlow.

Here Mr Buckley made a coarse retort on the score

of a disappointed lover's jealousy, and Mr Brownlow in return entreated him "not to deserve himself into the belief that a young man of Mr Herbert's acknowledged taste could submit to the penance of his society, unless from some motive of the most powerful nature. Affection for Miss Lee, the world said, was his inducement, and he believed the word for once was right."

In consequence of this conversation, Mr Buckley returned home boiling with wrath, and the first effusion of his displeasure was of course vented on Fanny, of whom he demanded, in a voice of thunder, "whether it were true that Mr Herbert came to his house on her account." Fanny, who had been long deliberating in what manner to break this very matter to her uncle, and who perceived that a storm was about to burst over her, gathered courage from the very desperation of her circumstances, and replied demurely, "I hope so."

"You hope so, busy!" retorted Mr Buckley. "What is your meaning?" "That I am sincerely attached to Mr Herbert, who is on his part devoted to me," said Fanny. "Pe-ugh!" ejaculated her uncle, with a long-drawn note of contempt, which brought the indignant colour into her cheeks; and she resumed, with some quickness, "And we have only waited for a suitable opportunity of acquainting you with the state of our affections, and that it is our intention to marry as soon as circumstances will permit." "State of your affections—stuff! Marry! fiddle faddle!" interrupted the squire insultingly. "Be so good as to go to bed, Miss Lee, and in the morning I will let you know my sentiments on this business." "With your leave, uncle, I would rather be informed of them to-night," said Fanny resolutely. "Well, then, madam, you shall be gratified in your preference of time," said her uncle, replacing his chamber candlestick on the table, and regarding her with a look that was intended to inspire her with apprehension. "It is my opinion that both you and Mr Herbert have acted in the most base, treacherous, and ungrateful manner towards me, in daring to form this clandestine, improper and unbecoming connection, under my very nose." "Nay sir," interrupted Fanny, "permit me to observe, that your own language in applying such terms to our engagement, is both improper and unbecoming, since it is of a nature that we are not ashamed of proclaiming before God and man." "Well, then, Madam Shameless," returned her uncle, "I beg leave, in reply, to inform you that it is my positive commands that you think no more of Mr Henry Herbert." "Obedience to such a mandate is not in my power," replied Fanny, coolly. "Whether you think of him or not, it is my pleasure that you put an end to all correspondence or connection with him, under peril of forfeiting a place in my house for ever! I see you are ready to return some insolent and foolish rejoinder, but I will hear nothing you have to say to-night. You now know my determination, and to-morrow morning I shall expect to be favoured with yours," said the old despot, waving his hand for her to depart.

The next morning, at an early hour, Fanny stood by her uncle's bedside, arrayed in a travelling dress, and, drawing aside his curtain, requested permission to speak to him. "Heyday! what does the fool want, disturbing my rest at six o'clock in the morning, and I could not sleep all night for the gout twinges in my toe?" muttered he, very wispishly. "I beg your pardon, uncle, for the intrusion, but you requested to hear my determination this morning," said Fanny. "Well, and if I did, what occasion was there to come pestering me about it now? Why could not you have waited till breakfast-time?" "Because, uncle, I shall probably be twenty miles off by your breakfast hour." "Stuff and nonsense! And what are you dressed up in that masquerading style for?"

"Because it is my intention to leave your house immediately—I have perhaps too long submitted to oppression; and that I shall do no longer. My resolution is also taken not to give up my engagement with Mr Herbert, for whom, when you allowed your own unbiased judgment to operate, you testified proper respect." "Why, what's all this of it?" said the old gentleman, evidently a good deal stupefied with the spirit of his niece; "why, are you really aware, Miss, that in departing you quit any house for ever?" "Perfectly, uncle; and as a proof that it is my intention to do so, I have sent down to the village to order a post-chaise, which will be here presently." "And pray, Miss Lee, may I ask whether you mean to go?" "Home!" echoed Mr Buckley; "where do you mean?" "To my father's house," replied she, bursting into tears, "where my joyous days of infancy and early youth were passed in peace and contentment, where even care was sweet amidst the general sympathy of affectionate hearts, and where I tasted that happiness which I have never known under your roof."

"Very pretty, Miss Fanny; so, this is your gratitude for all my favours; and the return you make to me for maintaining you in luxury for eight years, and hiring masters to teach you all manner of accomplishments, is to abandon me while I am laid up with the gout. Oh, my toe! I felt it coming on in the night—all your doings! brought on by anxiety on your account—shan't be able to stir hand or foot for a month. That's right, put your finger in your eye, and run home to daddy, and leave your poor old uncle to help himself as he can." "Nay, uncle, it was no wish of mine to leave you. It was yourself offered me that alternative, provided I would not resign Mr Herbert, which I would rather die than do," said Fanny. "Yet you resigned both Mr Brownlow and Sir Frederick Marden without remonstrance; why cannot you render the same obedience in this instance?" "Because, uncle, I love Herbert," replied Fanny, blushing. "And did you not love them?" "I could not have resigned them so easily if I had," replied Fanny, smiling. "Yet you looked vastly queer for a twelvemonth after you lost Sir Frederick. However, I must confess you behaved very dutifully in that affair; and if you will but give up your present caprice——"

"Spare, uncle, after having lost two good husbands in compliance with your caprice, it is but fair that I should now be permitted to take one to please my own, if you give my affection for Henry Herbert that name," returned

Fanny. "I cannot consent to your throwing yourself away on a poor curate." "Ah! he is rich in all that maketh true happiness," responded Fanny; "and you are yourself a proof, uncle, that wealth cannot purchase content." "Pshaw, fiddle-faddle; what has that to do with the present question? What occasion is there for you to marry at all?" "Nay, uncle, you have said so much in disparagement of old maids, that you can scarcely expect me to remain one of that despised body when I have the alternative of becoming a happy wife. But here comes the chaise—adieu, uncle." "Order it back to the village, and go to bed again—there's a good girl—and you shall have every thing in reason," said her uncle, who now saw that he was within an ace of losing his only means of solace—the only friend he had in the world. He also perceived that a single word would set all to rights, but shame forbade him to utter it. In this crisis, Fanny observed that there was surely nothing unreasonable in her wishing to become the wife of the man whom she both loved and esteemed. "Yes, there is; you will leave me if you marry Henry Herbert." "No, no, uncle," rejoined Fanny; "we will both stay beside you, and take care of you." "Oh, well, well, I see you will have your own way; and that it is plain I am to be made fool of between you both in my old age." "No, uncle—happy man." "Well! well! well! that is as it may turn out. There, get away with you, and let me have an hour's sleep after all this fuss, if I can; and tell Henry Herbert he may breakfast with us if he likes."

Fanny only curtseyed her thanks, closed the curtains, and withdrew to communicate her triumph to the happy lover, and within a week from that day she became Mrs. Herbert.

NOTES ON A FEW SUBJECTS.

CLIMACTERIC.

In a selection from the French *Anas*, or collections of anecdotes, published at the end of the last century, the following occurs under *Luthersana*:—"On such a day I will celebrate my son's birth. He will then be going into his seventh year, which is climacterical; that is, producing a change. For the seventh year produces a change in human creatures. The first stage of life is infancy; then childhood, which learns something. At fourteen the lad is taught more important things. At twenty-one he thinks of marriage. At twenty-eight he is providing for his family. At thirty-five he has some office in church or state. In his forty-third year he is engaged as a magistrate. So each seventh year is climacterical, and brings with it some change in the modes of thinking, situations, and manner of life."

This is a very fair specimen of what passed for excellent wisdom long ago, and there are still people who will be disposed to receive it as sound philosophy. When we inquire, in a really philosophical spirit, into the subject, how soon do we detect its fallacy and utter baselessness? The first seven years, according to this theory, is infancy, after which the child learns something. Now, the fact is, the first seven years is a time during which the generality of human beings learn more than during any other seven years of their lives. They learn in that time their native tongue, and acquire a large stock of ideas, though not of the kind which constitute learning. "At fourteen the lad is taught more important things." He was taught more important things at twelve than at ten, and at thirteen than at twelve. So he will be at fifteen than at fourteen. There is no sudden or great access, at fourteen, to the importance of any body's studies, except by accident. "At twenty-one he thinks of marriage." Why, in all likelihood, he thinks of it quite as much at eighteen. "At twenty-eight he is providing for his family." Yes, and at twenty-seven (if married so early) and twenty-nine, fully as much. "At thirty-five he has some office in church or state." Much more likely not. There are not offices in church and state for all who reach thirty-five. "In his forty-third year he is engaged as a magistrate." That is only as it happens. In short, there is not a particle of natural truth in the whole of this specimen of the oracular wisdom of the sixteenth century. Sixty-three—the ninth seventh—is said to be a fatal age for men. It may be so, from some peculiarity in the human constitution, but not because that year is one of a succession of sevenths.

In the country particularly, a vast number of sayings of the same nature are handed down from age to age as important truths. There is usually something plausible about them, which screens them from inquiry. But, if once challenged, it would in almost every case be found, that they have no better basis than the superstition of the Climacterics.

PROMISERS.

We find few people who can keep a promise. "I will see you to-morrow at one o'clock, to get this business finished," says one person; "You may depend upon my sending home the article on Wednesday night," says a second; "I will write to you the first opportunity," says a third; "If you will send on Saturday morning, I will pay your account," says a fourth; "You may depend on my mentioning the circumstance to Mr. So-and-so," says a fifth; "If I be spared till next summer, I will be sure to do that which you request," says a sixth—and so on, to the end of the chapter, are promises made, not one of which is fulfilled.

There is an equally established set of excuses for the non-performance of promises, and they are in

general of the most pitiful description. "Oh, I was so busy, that I could not get it attended to"—"I entirely forgot the circumstance"—"something else came in the way," &c. The generality of people do not seem to feel that there is a moral obligation in making a promise, which should, in all cases, be fulfilled, at whatever inconvenience. A person, for example, promises that he is to call on me at one o'clock to-morrow. Well, I expect him. I make my arrangements to be at home at the hour appointed; perhaps postpone the execution of some important business, in order not to disappoint my expected visitor. And, after all, he does not come at one o'clock. I wait till a quarter past one, half-past one, I even wait till two, and he does not make his appearance. Now, I leave it to any one to judge if this be warrantable conduct. I have been cheated of my time, not only to the extent of one whole hour, but perhaps of a whole afternoon; for the day is already far gone, and it is past the period that I could have turned my attention to other affairs of consequence. Yet, this conduct is so common that one is apt to be laughed at for expressing any concern about it. "It is the way of the world," says everybody, and there, it is imagined, is an end of the matter. We do not, however, like this plan of dragging in "the way of the world," as an excuse on all occasions for breaking through the obligations of social life. If we once allow it to gain a foothold, there is no saying what havoc it will commit.

We believe that many people, in making promises, do not know what it is that they profess themselves intending to do. They pronounce a certain number of words, with a certain kind of grin or simper, thinking all the time how well they are succeeding in pleasing the person spoken to, without entertaining the notion that they are making a promise which requires fulfilment. To *please* for the moment is evidently the first point which they study; to *perform* the intention expressed by the words, is the last. In this manner, not one promise in fifty, made by tradesmen to customers, is performed. The object with them is to please for the moment—to catch the order—and to leave the performance to chance. As we have learned how to estimate promises of this description, we do not now expect their performance; we know that the promise is a mere formula of words, no way symbolic of ideas.

Viewing promises in the light of gibble, introduces a new view of the value of words in common speech, which should forthwith find a place in dictionaries of phraseology. Opposite the words, "You may depend on my sending home the article on such a day," might be placed an equivalent number of syllables, thus—"Ys, ma, la, doo, pa, ra, too, ru, loo." These set to music, and sung in low harmonious cadences, would certainly have a pleasing effect, and would tickle the ear of the customer fully better, at least more innocently, than the dry words of the promise made with all the grimace which the countenance can possibly assume.

ADVERTISEMENTS FOR EDUCATED PERSONS.

We quote the following paragraph from a newspaper:—"An advertisement appeared during the past week, requiring a tutor to instruct four pupils from ten o'clock until two daily, in Greek, Latin, French, mathematics, and the use of the globes; salary fifty guineas. We will not aid and abet this insult to men of learning by giving the reference of these generous patrons, but we will just show the amount of their liberality. The terms are at the rate of £1 per week of six days, namely, 3s. 4d. per day. But there are four pupils, who are to be taught four hours; the remuneration, therefore, will stand at 10d. per hour for the lot, or at 2½d. per hour each; and to be taught Greek, Latin, French, mathematics, and the globes, by an university graduate! No wonder 'the schoolmaster is abroad,' when this is the patronage given to him at home!"

Aside this advertisement for a tutor, we may place the following parallel advertisement for an accomplished young lady, which appeared in a late number of the North British Advertiser:—"Wanted, as companion to a lady residing in the Highlands, a well-educated young lady; age about twenty, with pleasant manners and address, and who is a proficient in music and singing. As society is the chief object, no fixed salary will be given. An English young lady preferred." We wonder what sort of a conscience the writer of this advertisement possesses. She has the coolness to ask that a most accomplished young English lady—proficient in music and singing—shall abandon her prospects in life, her chances of respectable marriage, her friends and relatives, the sunny south itself, in order to come and be her companion in some dreary Highland abode—in fact, her toad-eater—all for what? why, no fixed salary, by which we suppose she means her cast-off gowns, caps, and ribbons, and a few paltry pounds of wages, not the fee of a good housemaid. Read this, ye fond parents who are bringing up your daughters as governesses; read it, and learn what sort of people your girls may be called upon to serve. Perhaps it may prevent your proceeding further in the delusion that you are providing a means of respectable subsistence for your children.

Now that we have broached this subject, we feel called upon to reprobate, in the strongest manner, the paltriness of the offers usually made in newspaper advertisements for all classes of teachers. An offer of a salary of £25 or £30 is quite common for a person

to teach the following branches:—English reading, grammar, writing, arithmetic, Latin, mathematics, and the principles of religion. It is rare to see £50 offered, and more than that would be considered quite ridiculous, except for a head master of an academy. This almost uniform low rate of remuneration offered to schoolmasters, has a pernicious effect on the general education of the country. No man of ability, except from necessity, or for the sake of a temporary subsistence until something better casts up, will devote himself to the laborious occupation of a teacher. He has also no inducement to acquire a proficiency in his profession. What sort of a salary is £60 to offer a properly bred teacher—what is £80? Good artizans will make as much. We know many mechanics who are receiving a guinea a-week and upwards of wages, and several who are realising £70 or £80 a-year. It is absurd, surely, to expect good teachers—trained and educated men—at wages not higher than those given to men who have neither to be subjected to long scholastic training, nor to maintain the expensive external appearance of gentlemen. The same thing may be said of the salaries of governesses or female teachers. The salary of £20 to a governess is much below £8 or £10 for a housemaid, because the latter has had no previous expensive education, and has no rank to maintain. Take another comparison. Bookbinders give a wage of 8s. per week, or £20 a-year, to girls for folding the sheets of their books. The girl who makes this sum, is infinitely better paid than the governess with the same salary, and her board to boot. We mention these things for the purpose of shaming people into offering higher wages than they usually do for the services of educated men or women. All classes of workers appear to act in combination, in order to protect their common interests, except the teachers of youth. They have hitherto had no recourse to the principle of clamour for redress. Whether these few words spoken in their favour shall have any effect in bringing their case into consideration, we do not know; an act of simple justice only is done in mentioning the subject.

EDIE OF THE HAWKLAW SYKE.

In a late pleasing little trip through the beautiful vale of Clyde, in its upper and more secluded part, I chanced to alight upon a fine instance of many independence and persevering industry in the very humblest walk of life. It was upon the afternoon of a clear sunshiny day in September, while passing with staff in hand along one of the narrow dales that radiate from the upper part of the Clyde, that I became acquainted for the first time with the sequestered spot named the Hawkshaw Syke. The purity of the atmosphere, and a walk of some eight or ten miles, had given an extraordinary keenness to my appetite, which I longed to satisfy; when, as good luck would have it, a human habitation made its appearance under the lee of a rising ground on the waste, beside a few scattered old ash-trees.

It is seldom that a Scottish peasant's hut is shut against the weary stranger. There may be little to give—perhaps only a piece of oatmeal cake, or a potato and a bowl of milk—but it is offered cheerfully. The humble mendicant who asks permission to light his pipe, and the fatigued sportsman who seeks shelter and refreshment, have their requests equally granted. Any one with a respectable exterior and civility of manner, is certain to meet with the most cordial hospitality. I felt satisfied, therefore, that the hut would be to me a haven of rest and refreshment, and I struck across a meadow of natural grass, on which a sleek brown and white spotted cow was grazing, and soon came to the threshold of the humble cot.

I paused for a moment before entering, to take a survey of the premises, which consisted of dwelling flanked on the one side by a byre or cow-house, and on the other by a pig-stye, the whole forming one of the most picturesque masses of architecture which could anywhere be seen. The building was in the rudest possible style, built with stone and clay, here and there dotted with a patch of lime; and the roof, which was composed of turf and thatch, was surmounted by one of the most delightfully old-fashioned chimneys of sticks and divots, which I had seen for the last five-and-twenty years. The grouping was admirable—no straight or stiff lines, no pretensions to regularity. The door possessed a sort of rude porch, on which were hung two or three wooden milk pails drying in the sun; against the wall leaned a churn dismounted from its stand, indicating that the family at least commanded the luxury of sweet butter; at the gable of the cow-house was erected a simple apparatus for pressing cheese—it was a simple apparatus truly, nothing more than a deal, with one extremity thrust into the wall, and the other loaded with a heavy stone, while the cheese was placed below, and sustained the leverage pressure so laid upon it.

The scene reminded me of one of Ramsay's verses—

A snug thick house, before the door a green;
Hens on the midden, ducks in tubs are seen,
On this side stands a barn, on that a byre;
A peat-stack joins, and forms a rural square.

There was not exactly a rural square, for the barn was not present, and the peat-stack, a dark edifice of some ten or twelve feet in height, which gave ample promise of *edlin* for the ensuing winter, stood respectfully back at an angle with the dwelling. Having paused for a few moments to observe these favourable signs of a certain degree of rural comfort, I introduced myself to the interior of the cottage. A few respectful observations on the weather and the appearance of the crops sufficiently paved the way for an intimacy with the inhabitants, who were a pair of as decent-looking persons as one could expect to find in any sphere of life. My approach had been observed from a small window in front, and on my entrance, a chair was instantly wiped and placed for me before the wooden bed which formed the partition of the apartment, which was kitchen, dining, and bed-room all in one. The Scotch are not famed for the cleanliness of their cottages, but in the present instance there was nothing to complain of on that score. There was also an old-fashionedness about the place, which one now seldom sees in these days of modernisation and improvement. None of your small contracted chimneys with iron grates, but a huge clay-plastered *lum*, up which you might have driven a good-sized wheel-barrow, garnished round with a ham in the process of roasting, an immense wooden *swee*, and various kitchen utensils; the whole affording a tolerably correct portraiture of Symon's cottage in the Gentle Shepherd—

'Tis Symon's house; please to step in,
And vis'ys round and round;
There's nought superfluous to give pain,
Or costly to be found.
Yet all is clean: a clear peat-ingle
Glow amidst the floor;
The green horn-spoons, beech-luggies mingle,
On skefis foregast the door.

My visit was luckily timed. The potato pot had just been placed on the floor ready for the mashing of its contents, which sent up a steam that curled away among the rafters above, and vanished in the capacious chimney which overhung the ingle. Already, also, the white-haired healthy-looking children were clustering about their mother, and looking with longing eyes for their mid-day meal, which she was about to prepare; while the father of the family—a hard-wrought-looking man of middle age, with a face as brown as a berry, and an acre of beard of a week's growth—had taken his seat, and seemed perfectly ready for the attack. Soon the grace was duly said, and soon was I invited to assist myself to the dish so temptingly placed before me.

It would perhaps tire the reader if I were to detail the kindness which I on this occasion experienced. After a little conversation, it appeared that my host and his wife knew some of my relatives in a neighbouring part of the country, and this led the worthy couple to make a free communication to me of a variety of particulars regarding their present situation, which I have thrown into the following simple narrative.

Edie Howison had been bred a weaver in Lanark. At first he had been put to the cotton line, but on that beginning to fail, he had tried his hand at "customer-work," such as homespun linens for sheeting to the farmers' wives, blankets for lasses' provisos, and black and white checked plaids for the neighbouring shepherds. This kind of desultory trade did very well for a while, but at last it turned to be about as bad as the cotton line. Every kind of fabric which Edie laid himself out for, was one by one taken up by the great manufacturing establishments in the country, and customer-work was well nigh driven from the field. What was now to be done? Edie thought a whole year upon the matter. He was not going to be rash in any thing he did; for he was by this time married, and the bairns, poor things, were beginning to run about the house. Having thus "fallen into a family," he required to be very cautious; at the same time, things were getting always the longer the worse, and there was no time to be put off. Well, "he thought and better thought" for a whole year, and at the end of that period he had made up his mind what to do, if it would do with him. One day about the fore-end of summer he said to his wife, "Now, Tibby, my woman, I am gaun up the water the day to try and get a word o' Mr Alexander o' the Smeaton Shaw." "What wad ye do that for, gudeman?" "I'll tell ye what it is, Tibby: it's nae use hingin' ony langer in the toun here. The wark's clean dune, and I'm gaun up by to see if Mr Alexander will gie me a bit o' his outlying grund at a sma' rent—but I'll no say ony mair about it till I see if I can get the business managed." With this resolve, Edie set out on his mission, and was successful. He had once wrought a few pairs of blankets for Mrs Alexander, by which means he had established a small degree of intimacy in the family, and the proposal he made, though strange in its way, was after some arrangements acceded to. It was shortly this: Edie was to rent about four acres of land in an outlying part of the farm of the Smeaton Shaw, called Hawklaw Syke, for which he was to pay eight pounds sterling a-year; the first twelve months, however, were to be free; and if he did not fail in payment, he was to remain in possession as long as Mr Alexander's own lease lasted, which was nearly nineteen years.

Edie flew to inform his wife of the settlement of the affair, and in less than a month yoked to the work of preparing a cottage on his small farm for the reception of his family. He selected the spot which I have already described. It had in ancient times been the site of a religious structure of some kind; but the edifice had long since been destroyed, and its moulderings had become partially covered with the sward. With the aid of a pick, hammer, and shovel, Edie soon explored a foundation, and with the stones which he raised to light, along with clay from an adjoining bank, he speedily reared the walls of his house. A few burdens of timber, the thinning of a plantation at no great distance, and purchased at an exceedingly cheap rate from the forester, completed the chief material of his habitation, which he thatched, floored, and finished in all its departments, with his own hands. A proud man was Edie Howison when he had accomplished the erection of his hut on the waste; but he was a prouder man still, on the day that he drove a cartful of plenishing to the door, with his wife Tibby seated with her children on the top, in the midst of wheels and reels, and chairs with their long backs hanging down over the sides of the vehicle, and their feet sticking out in all directions in the air.

Edie had a great deal to do at first, and little to do with it. At the period of his removal, he possessed of available worldly substance, half a boll of meal, three bolls of potatoes, and about four pounds in money. How he came to possess such a large sum in cash, requires to be mentioned. Edie and his wife had always been remarkable for saving. For number of years they had striven hard to "lay by a shilling now and then in a quiet way." These small sums they had safely lodged in the Savings' Bank at Lanark, and the principal and interest now amounted to four pounds, which enabled Edie and his family not only "to put over the back end of the first year" in his farm, but to furnish various things necessary for the operations of the field. Edie had likewise a good straicken or coarse linen web in the loom, half wrought, and which he was preparing as a small mercantile adventure; for it came within the limits of his plan, still to carry on the weaving of any jobs that might fall in his way, thus uniting the business of the agriculturist with that of the operative mechanic. "I had a gay sair fecht just at the beginning," said Edie; "when the wather was tolerable, I kept at the delving wi' the spade; and when it cam on wat, I set to the loom, never letting a moment pass uselessly." In this manner, by assiduous labour, Edie actually delved the whole of his four acres of ground, partitioned it into separate plots for his crops, drew off the water of the syke by cross open cuts, and erected drystone walls round the whole, as a protection from the sheep of the adjacent hill-sides. Tibby, however, rendered valuable assistance in the concern; besides managing her family, she toiled along with Edie in all his farming operations, and took upon herself the out-door department of the customer-work. The youngsters now began to do something for the good of the family. Tam, the eldest, went as a herd-boy to Mr Alexander, his wages being paid to the father and mother in the form of a Scots pint of skimmed milk daily. Lizzy, the next, was likewise sent off as a servant, and her wages, though only five-and-twenty shillings in the half year, were of some use to the family. Owing to insufficiency of capital, Edie was at a sad pinch to get his ground put in crop; but even this difficulty yielded to the energy of his character. He struck a bargain with a neighbouring farmer, by which he and his wife, Tibby, were to give a certain number of days' shearing in harvest, for a day's use of a plough, and seed corn for one of his small fields. He thus got his first crop of barley in, and as he had burnt the surface turf, no manure was thought advisable for the first crop. Before the second season of potato planting came round, he had procured a pig; and at the end of the third year he was able to buy a cow. These animals were of great consequence to Edie. They afforded manure for the fields, and in this respect alone were indispensable.

At the period of my visit to Edie's cottage, he had spent nine years on the spot, and had attained a degree of comfort which could hardly have been expected from one in his situation. The ground of his little farm, which had been literally reclaimed from a moorish waste, exhibited distinct sections for a rotation of crops. There was a small angular patch laid off in clover grass for the cow; next it was about an acre of potatoes; farther on there was a field in which a crop of barley had just been cut, and was now lying in sheaves ready for stooking; and beyond that again was a plot of capital Swedish turnips. One patch of ground lay unused. The potato harvest of 1836 had been a failure; and this was a dire calamity to people in the country who make a practice of rearing a pig. When the potato crop fails, the pig must go. This had been the case with poor Edie. He was obliged to kill his pig for lack of food; consequently, he suffered in two ways—first, his family were deprived of the modicum of ham, the only kind of animal food in which they were able to indulge; and, second, there was a deficiency of manure for his fields. But the excellent crop of 1837 had set all to rights. The potatoes were plentiful and excellent, so a new pig was about to be brought home; and there was such an abundant supply both of grass and turnips, that it was to be famous times for the cow during the ensuing winter and spring. Speaking of the cow, puts me in remembrance of one point in Edie's arrangements

which I had almost forgot. The farmer from whom he had his ground owned large flocks of sheep, chiefly of the black-faced kind, which have a propensity to wander, and require a good deal of attention to prevent them from straggling beyond their proper bounds. Now, Edie's cottage chanced to be favourably situated for his giving some assistance in this respect. He was instructed to prevent any of the hill-flocks from straggling down the vale beyond his cottage, and in this branch of duty was powerfully seconded by an old colly which I had noticed on my entrance to the hut. Bawty, to be sure, could use only three legs in running, but then he could bark well, and that was a great point in his character. A good well-directed bark, from the top of an adjoining hillock, and a demonstration of a run, answered all the purpose of keeping the fleecy denizens of the mountains in check. For the efficient service thus rendered to the farmer of the Hawklaw Syke, Edie was at liberty to tether his cow in the low-lying meadow beyond his little steading, and as the herbage was natural and sweet, it produced most delicious milk.

It was chiefly through the agency of the cow that Edie's thrifty wife was able "to make the two ends meet." The butter which was produced, was called for weekly by one of those wandering cadgers, who, with a horse and cart, collect poultry, eggs, and butter for the Edinburgh market, bringing in return either money or articles of grocery for the country housewives. Customer-work also did its part. Edie was here removed a number of miles from Lanark, a distance to which shop goods did not effectually penetrate. He therefore had a little work in this line; and when I inspected his loom in "the ben end," it had set in it a very excellent checked plaid, which was preparing for the minister of the parish, and was made of the finest lambs' wool.

"Well, Edie," said I, at parting and proceeding on my journey, after presenting some little presents to the children, which the parents were, of course, loud in proclaiming against, declaring "there was nae occasion for ony thing o' the kind;" "well, Edie, I think you have got all things pretty comfortable now about you, and have much reason to be satisfied, considering all things." "Deed, sir, I wad be band to compleen. To be sure we have a great deal to do, ae way and another; just a constant working to scrape thegither the rent, and keep the banes green. But, then, we ken that it's our lot. What wad a puri man do but work? It wad never do to sit down and greet. Nu, na, as lang as we're spared, we maun do our best to work, and pay our way, and see keep the croun o' the causeway to the best o' our ability."

BIOGRAPHIC SKETCHES.

MRS INCHBALD.

THE farm of Standingfield, near Bury St Edmund's, in the county of Suffolk, was the residence of the parents of Elizabeth Simpson, afterwards Mrs Inchbald, whose birth took place there on the 15th of October 1753. The family of which she was a member was a large one, and all the females pertaining to it were distinguished for their beauty, Elizabeth being inferior to none of the others in this respect. Her education in youth was so very defective that she never attended any school, but, being taught at home to read and write, she acquired a love of books, which remedied, in part, the want of the ordinary means of instruction. Her writing and orthography, however, were incorrect to the latest period of her life.

The Standingfield family seem to have had all, more or less, a theatrical turn, and to have cultivated the acquaintance of the members of that profession residing at Bury and Norwich. At the age of seventeen, Elizabeth evinced her participation in the family propensity, by applying for an engagement on the Norwich stage. The manager refused the application, but the lady's inclination to be an actress was irrepressible. In the month of April 1772, Elizabeth committed the rash and imprudent action of leaving home, without the knowledge of her family, and taking the road to London, in which city she had been once before, on a visit to her married sisters. Before making her arrival known to her friends, she spent several days in endeavouring to get an engagement from the London managers. The following description of her personal appearance shows how well she was qualified, in one respect, for the stage: "tall, slender, straight, of the purest complexion and most beautiful features; her hair of a golden auburn, and her eyes full at once of spirit and sweetness." This lovely applicant seems to have received base insults from one, at least, of the metropolitan managers, and was glad, in a few days, to betake herself to her sisters; nor did she succeed at all, at this time, in her wish to appear on the London boards.

A sense of her unprotected situation, however, led our heroine to a more important step shortly after her arrival in the capital. On her former visit, she had received particular attentions from Mr Inchbald, a respectable comedian of middle age, and had after-

wards permitted him to correspond with her. This gentleman she now married, urged to it rather by circumstances than by affection. Their married life, nevertheless, was tolerably happy upon the whole; and, in truth, her biographers would probably have called it perfectly happy, had not Mrs Inchbald left behind her a diary, the most honest record of feelings and even passing thoughts that ever, perhaps, was penned. Some months after their union, Mrs Inchbald went with her husband to Bristol, where she made her first appearance on the stage in the character of Cordelia in King Lear. She never rose above respectability as an actress. Her good sense, her perseverance, and her personal advantages, prevented her from ranking below that standard.

In the first years of her wedded life, Mrs Inchbald accompanied her husband to Edinburgh, in fulfilment of an engagement including both. At this time, her husband and she earned conjointly a tolerable salary, but they were in the constant habit of falling out about the division or appropriation of the money. The wife would fain have reserved a portion of her winnings for the benefit of her relations in England, who had fallen into bad circumstances. This was regularly opposed by the husband, and many little domestic "tiffs" were the consequence. This is only worth mentioning, because it shows how early Mrs Inchbald's generous and affectionate nature led her to devote her honourable gains to the service of her friends.

After spending a year or two in Scotland, the Inchbalds left that country, and passed some months in France, where the husband proposed to pursue the profession of a painter, in which he had some skill. He did not succeed, and the pair returned to England in considerable distress for want of money. They now lived a short time in Brighton, and were sometimes so poorly off as to make a meal on field turnips! An engagement at the theatre of York, ultimately relieved them, though not until they had been at Liverpool, Birmingham, and several other places, in search of proper professional employment. During these tours, Mrs Inchbald made the acquaintance of John Kemble, his sister Mrs Siddons, and the dramatist Holcroft, all of whom continued, through life, to be her attached friends. To John Kemble our heroine first showed the outline of a story she had begun to write, and which, when finished, surprised and delighted the world, many years afterwards, under the title of the Simple Story. The Inchbalds enjoyed comparative prosperity at York. They earned usually two guineas and a half a-week between them, and a considerable part of this they contrived to save. Mrs Inchbald, besides, gave occasional assistance to her own family, and particularly to her sisters, two of whom had been recently left widows in London. After a year or two spent in her new situation, Mrs Inchbald had the misfortune to lose her husband, whose death she deeply and sincerely lamented. She calls the day of his death a "day of horror," and the succeeding week "a week of grief, horror, and affliction." Thus left alone, at the age of twenty-six, a young and beautiful widow, Mrs Inchbald continued her professional career, and also persisted in those habits of economy, commenced before her husband's death, and which afterwards marked her conduct so prominently.

In the year (1780) following her bereavement, Mrs Inchbald accepted of a very short engagement at Edinburgh. After its close, she returned for a short time to York, and then made her appearance for the first time before a London audience. She was not very successful, and, in fact, the pantomimic value of her fine person seems to have been for several years the chief inducement, on the part of the managers, to her having an engagement. She was verging towards thirty years of age when she settled in London, and for several succeeding years she remained in the histrionic position we have described, without being much heard of otherwise, beyond the circle of players and theatrical amateurs. From her first arrival in the metropolis, she followed a bachelor-like and independent mode of life. Her income was sometimes exceedingly scanty, but by living in cheap lodgings, occasionally going without a dinner, and economising in every honest way, she not only contrived to keep herself free of debt, but was also able to assist her relatives, whose circumstances had become more and more distressed. A change for the better at length came over the face of Mrs Inchbald's affairs, and this, as usual, she owed to her own exertions. Undeterred by the rejection of a full half-dozen of dramatic pieces, the produce of her leisure hours, she presented (in 1784) to Colman, the manager of the Haymarket theatre, a farce called the "Mogul's Tale." It was performed with the greatest applause, and brought its authoress a hundred guineas. This broke the ice, and satisfied the theatrical dictators of the abilities of the woman whose pieces they had hitherto refused even to look at, from their being written—for economy, of course—on whitey-brown paper, and also in the crampst of hands, and a doubtful style or orthography. A second drama, the comedy of "I'll Tell you What," was acted in the following year, and yielded to Mrs Inchbald three hundred pounds, besides a considerable sum from the book-sellers for copyright. These successes induced her to set to, with fresh ardour, to polish and remodel her many half-finished performances. Her "Simple Story," and a great number of pieces which delighted the public, and now form a part of the standard dramatic literature of England, were the result of her labours within the ten or twelve years following the successful issuing of the "Mogul's Tale" in 1784. The names of a few of her principal plays are, "Wives as they Were," "The Child of Nature," "Next-door Neighbours," "The Wedding-Day," "Lovers' Vows," &c. A second novel, also, called "Nature and Art," and considered by many as equal to her first, was published in 1796. She edited, moreover, a standard collection (the best that exists) of English plays, writing short prefaces to all of them. For these, and other labours which it is unnecessary particularly to refer to, she received sum, always increasing in magnitude as her talents became more fully appreciated by the public.

As the prospects of Mrs Inchbald brightened, and her means increased, her true character began to develop itself more fully. When her gains enabled her to place £.500 in the funds, she renewed her vow of economy, and resolved to be dependent on the "courtesy of no manager." Whenever this "munnificent miser," as she is termed by a critic on her life, received a fresh sum for her labours, she made holiday among her poor friends, by allotting to them a liberal share of her receipts. Her regular expenditure, on account of her own domestic affairs, was fixed at a certain sum (seldom exceeding 30s. a-week), but she frequently saved a good deal even from this; and all her savings of this order were—not laid by, but distributed among her needy dependents, at the close of her financial year. And to effect these savings, so to be applied, she submitted to many personal privations and inconveniences, and made herself, in truth, a household drudge.

Such was the manner in which Mrs Inchbald lived, even in the earlier part of her London life. Her behaviour in later years, as we shall have occasion shortly to notice, was still more nobly self-denying. Her character, however, would not be fully understood, without some reference to other distinguishing parts of her conduct. She was, perhaps, the most candid of human beings, and carried her practice of plain dealing even to the verge of eccentricity. She wrote a journal of her own life, of which only some scraps remain, and in these she makes some curious revelations about her little marrying plans. In her early widowhood, she was by no means averse to a second matrimonial engagement. She says honestly, for example, that she would have "jumped at John Kemble;" but though the mighty tragedian admired her much, he did not step forward as a suitor. We suspect that if every young and beautiful widow were to make a similar confession of her passing thoughts, there would be many revelations of such innocent speculations as Mrs Inchbald's. Do not, however, let the character of this amiable woman be misunderstood. She was not mercenary in her manoeuvring; for she refused the hand of a landed gentleman, though backed by a carriage and a settlement of £.500 a-year.

We return to what we think the best and brightest side of our heroine's character, though no one, we trust, will be disposed to think the less of her for the matrimonial imaginings referred to. They but tell that her nature was human. For several years subsequent to her attainment of literary distinction, Mrs Inchbald continued to mingle to a considerable extent with the world, though less than the fashionable friends who courted her society, wished. After leaving the stage, however, in 1789, she gradually became more retired in her habits, and finally took leave of the world almost entirely. Her reason for this conduct was a most honourable one. Her two sisters, long assisted by her, had latterly become totally dependent upon her, and to the care and solacement of these relatives, who were much older than herself, Mrs Inchbald devoted her time and her means. Never given to look below the surface, and knowing her to have earned a considerable sum, the world, on seeing her become more and more economical in her personal expenditure, charitably bestowed on her the name of a *miser*—some even called her *mad*. Mark the noble answer given by the miser to these charges, when a friend made them known to her: "I am now fifty-two years old, and yet, if I were to dress, paint, and visit, no one would call my understanding in question; or, if I were to beg from all my acquaintances a guinea or two as a subscription for a foolish book, no one would accuse me of avarice. But because I choose that retirement suitable to my years, and think it my duty to support two sisters instead of one servant, I am accused of madness. I might plunge in debt, be confined in prison, or pensioner on the 'Literary Fund,' or be gay as a girl of eighteen, and yet be considered as perfectly in my senses; but because I choose to live in independence—affluence to me—with a mind serene, prospects unclouded, I am supposed to be mad." Had Sheridan or Coleridge entertained such noble and just sentiments as these, how much misery might have been avoided by them in their lives, and how much more honourable would have been the reputations they left behind them! They were often thrown upon the bounty of their friends; Mrs Inchbald, with inferior opportunities, fed and supported *hers*.

Still more affecting than the above extract, are the following quotations from other letters. One of her sisters died, and of the remaining one, who, for her greater comfort, lived beside her grandchildren, separately from Mrs Inchbald, the latter thus speaks:—

"Poor woman, she is now so infirm that she cannot walk a few paces without resting—her hair is white as snow, and her teeth are all gone." Again, speaking of the privations to which she submitted for this poor sister's sake, Mrs Inchbald writes:—"Many a time this winter, when I cried with cold, I said to myself, 'But, thank God, my sister has not to stir from her room; she has her fire lighted every morning; all her provision bought, and brought to her ready cooked; she would be less able to bear what I bear; and how much more would I have to suffer, but from this reflection!' It almost made me *warm*, when I reflected that she suffered no cold." A blessed thing it is to be a miser, if every such person has a purpose in their saving, similar to the following:—

"I say no to all the vanities of the world, and perhaps soon shall have to say that I allow my poor infirm sister a hundred a-year."

I have raised my allowance to eighty; but in the rapid stride of her wants, and my obligation as a Christian to make no selfish refusal to the poor, a few months, I foresee, must make the sum a hundred." These were the aims and objects of her whom the world called a mad-woman and a miser.

Retired, in her latter years, as her mode of life was, Mrs Inchbald was occasionally drawn from her privacy, at the pressing request of her friends, among whom she numbered the Edgeworths, Mrs Opie, and many other persons of note. In 1812, Mrs Opie induced our recluse to consent to a meeting with Madame de Staél, who was then in England. The illustrious foreigner expressed the highest respect for the authoress of the "Simple Story." Speaking of this meeting, Mrs Inchbald says, "Madame de Staél entreated me to explain to her the motive why I shunned society. 'Because,' I replied, 'I dread the loneliness that will follow.' 'What! will you feel your solitude more when you return from this company, than you did before you came hither?' 'Yes.' 'I should think it would elevate your spirits; why will you feel your loneliness more?' 'Because I have no one to tell that I have seen you; no one to describe your person to; no one to whom I can repeat the many encomiums you have passed on my "Simple Story"; no one to enjoy any of your praises but myself.' 'Ah, ah! you have no children;' and she turned to an elegant young woman, her daughter, with pathetic tenderness." Mrs Inchbald went home from this interview deeply sensible of her loneliness, but she had occasion soon to see that the situation of a parent had also its sorrows. On calling a few days after on Madame de Staél, that eminent woman was ill, news having come that her son, at the age of nineteen, had perished in a duel.

Mrs Inchbald survived till the year 1821, when she died at Kensington, aged 69. As the simple tribute to her memory, in the churchyard of that place, tells, "her writings will be cherished while Truth, Simplicity, and Feeling, command public admiration. Her retired and exemplary life closed, as it existed, in acts of charity and benevolence."

POPULAR INFORMATION ON SCIENCE.

WHY ARE OUR BODIES WARM?

WARMTH, in us, so invariably attends a state of health, and declines so regularly with the declining powers of life, that it is naturally a thing of great importance in our eyes. In the language of common life, as well as in poetry, warmth becomes an image to express whatever is genial to man, and coldness on the other hand the emblem of whatever is harsh and unacceptable. A warm heart—the most unphilosophical of expressions, for the heart is not the seat of any mental affections; yet how well does the phrase suit with all our ordinary notions, and how impossible to substitute any that would be apt to have equal currency! We may be said to have a prepossession in favour of heat. It is one of the natural *goods* that we most delight in, and most entirely appreciate.

It is curious to trace sentiments of this kind to their natural causes. Of animals, some have warm, and others cold blood. We belong to the classes which have warm blood, though not to that which has the warmest; and we accordingly appreciate whatever tends to support heat in our system, even unto the degree of likening other good things unto heat. But how comes our blood to be warm?

Till a recent period, the cause of the warmth of certain animals was but very imperfectly understood. Some light has lately dawned upon the subject, in consequence of the advances of the science of chemistry, and the accuracy with which natural circumstances are now investigated. It has therefore become possible to say with nearly absolute certainty how heat is generated and supported in our bodies. In order that the reader may comprehend this point, it is necessary to call to his recollection the character and relative position of the organs concerned in the circulation of the blood. The great agent in this vital process is the heart, a hollow body of a conical shape, situated in the left side of the chest, and composed of strong muscular fibres, which possess a contracting power on which the circulation of the blood depends. The interior of the

heart is divided into four cavities, two of which serve to circulate the blood through the body, while the other two conduct to a secondary circulation of the blood, which takes place in the lungs. The reasons why these two circulations exist in the body, are as follow. Every time that the blood is transmitted through the body, the fluid undergoes certain changes, which render it no longer fit to fulfil its purpose in the system. By being circulated through the lungs, its essential properties are renewed; through certain chemical changes to which it is there subjected.

Before these changes can be understood, it is necessary for the reader to keep in mind what the condition of the blood is when brought to the lungs. It left the heart charged with nutritious particles, was circulated over the body, gave out to each part its vital food, and returned to the lungs, loaded, in consequence of the removal of other principles, with carbon, which is extremely noxious when in excess, and would soon destroy life. In this deteriorated condition, the blood undergoes a new and distinct circulation through the lungs, where a remedy is provided. The oxygen of the inspired atmospheric air combines with the super-abundant and hurtful carbon, forming carbonic acid gas, which is removed by expiration. This fact is ascertained by the examination of air, before and after its passage through the lungs. The following table is from Magendie's Physiology —

| 20 inches of inspired air consist of | 20 inches of expired air consist of |
|--------------------------------------|-------------------------------------|
| Water 00.75 | Water 01.5 |
| Carbonic acid 00.30 | Carbonic acid 3.4 |
| Oxygen 21 | Oxygen 17.6 |
| Nitrogen 79 | Nitrogen 78 |
| 100.95 | 101.5 |

(The addition here, upon the whole, arises from the humid vapour constantly evaporating from the lungs, and is of no consequence to the present question.) The important fact is, that carbonic acid is formed at the expense of the atmospheric oxygen, the loss of the latter in the above tables being exactly balanced by the acid gained. Here, then, do we find the deadly refuse of the system removed by the transmission of the blood through the lungs; an object of itself sufficiently great and necessary to account for the whole respiratory apparatus. The blood, restored to its florid hue, and again capable of fulfilling its purpose, is sent back from the lungs to the heart, to be anew propelled through the body.

But the respiratory circulation is attended with other results, which, if science hath rightly concluded regarding them, give us an example of ingenuity of design that cannot be equalled. In the formation of carbonic acid, heat is evolved; and it is highly probable that this very formation of acid, which goes on continually in the body, is the chief source of *animal heat*. If this inference be correct, how shall we sufficiently admire that wisdom and skill, which, in constructing a piece of mechanism, can make the very process of removing refuse the means of working out a great and indispensable end—can by one simple chemical law at once expel a deadly poison, and maintain the warmth essential to life!

No explanation of the source of animal heat has ever been suggested of a nature so satisfactory as this. Looking at the small quantity of carbonic acid (as shown in the tables already given) formed at a time in the lungs, some may be apt to conceive that the process is quite inadequate to the production and maintenance of the high temperature which the animal frame at all times possesses. But this impression is founded on but a superficial glance of the subject. When the total amount of the air that passes through the lungs in one day (or in twenty-four hours) is calculated, and the proportion of carbonic acid gas in the whole ascertained, it is seen, that, in the time mentioned, the enormous quantity of two pounds weight of carbon is thrown off from the body. This shows the magnitude and importance of the process much more clearly than when we only have the quantity of gas formed at every inspiration before the mind.

We shall now direct attention to the animals that differ, in respect to heat of blood, from man. All inquiries of this nature corroborate the theory already stated. In all those animals where the lungs are large, and the air vesicles numerous, the temperature of the blood is high; for in these cases the consumption of oxygen, and the consequent generation of carbonic acid gas, are proportionately great. In those animals, again, where the lungs are small, or where the blood of the body is not brought freely into contact with air in the respiratory organs, the temperature is low, because there little carbonic acid is generated. Upon this comparative generation of carbonic acid, the division of animals into warm-blooded and cold-blooded is founded. Fishes are cold-blooded, because, though the respiratory organs in them are large and freely permeated by blood, no more air is brought into contact with these organs, than that contained in the water in which they live. Reptiles are cold-blooded for another reason, though the principle is in both cases the same. Reptiles respire air freely, but only a part of the blood of their bodies circulates through the small and imperfectly divided air-bags which constitutes the respiratory organs in them. Worms, insects, &c. are also cold-blooded, the ultimate cause being always the defective generation of carbonic acid. Turning again to warm-blooded animals, whether by land or sea, we find in all of them respiratory organs constituted so as to permit the production of the acid

in question. In the whale and other warm-blooded creatures of the sea, and in all the mammiferous inhabitants of the land, the lungs are comparatively large, and the air-cells so numerous as to present an immense extent of surface, where the whole blood of the body may come into contact with the air. Natural history, in short, bears out in every point the conclusion, that animal heat is dependent on the generation of carbonic acid in the respiratory organs.

There are some remarkable differences between the cold-blooded and warm-blooded animals, as respects the equability of the temperature of their bodies. The temperature of cold-blooded animals varies with that of the surrounding medium; the temperature of the warm-blooded remains nearly at the same fixed point, however the heat of the surrounding medium may change. The cause of the uniformity of temperature in warm-blooded animals may be explained as follows: — The ordinary temperature of the blood of individuals in a state of health is 98 degrees of the thermometer. When the animal is exposed to a great degree of cold, it naturally and involuntarily consumes a greater quantity of oxygen, by which means heat is evolved to an extent corresponding with the cold. When the animal is exposed to a great degree of heat, it consumes a smaller quantity of oxygen, by which means a correspondingly small quantity of heat is generated. Thus, there is a regulating principle perpetually at work in our system, by which the heat of our blood is preserved at a uniform temperature. In the case of exposure of the body to a highly heated atmosphere, or when it is undergoing violent exercise, it perspires, and this perspiration is a simple result of quickened circulation (not higher temperature) of the blood, there being a secretion and throwing off of fluids in correspondence with the activity of the circulation. If the perspiration, under such circumstances, were checked, the most fatal results would ensue. The equability of temperature in warm-blooded animals has been most strikingly exemplified by certain experiments to which the human body has been subjected. Dr Blagden gives an account of the experiments which he and others made to determine this point. After trying several lower temperatures, Dr Blagden entered a chamber, the temperature of which was raised to the 200th degree. He thus describes his feelings: —

"At this time I went into the room, with the addition to my common clothes of a pair of thick worsted stockings drawn over my shoes, and reaching some way above my knees. I also put on a pair of gloves, and held a cloth constantly between my face and the stove (necessary precautions against the scorching of the red-hot iron). I remained eight minutes in this situation, frequently walking about to all the different parts of the room, but standing still most of the time in the coolest spot near the lowest thermometer. The air felt very hot, but by no means so as to give pain. I had no doubt of being able to bear a much greater heat, and all who went into the room were of the same opinion. I sweated, but not very profusely. For seven minutes my breathing remained perfectly good; but after that time, I began to feel an oppression in my lungs, attended with a sense of anxiety; which gradually increasing for the space of a minute, I thought it most prudent to end the experiment. My pulse, counted as soon as I came into the cool air, for the uneasy feeling rendered me incapable of examining it in the room, beat at the rate of a hundred and forty-four pulsations in a minute, which is more than double its ordinary quickness. In the course of this experiment, and others of the same kind by several of the gentlemen present, some circumstances occurred to us which had not been remarked before. The heat, as might have been expected, felt most intense when we were in motion; and on the same principle, a blast of the heated air from a pair of bellows was scarcely to be borne: the sensation in both these cases exactly resembled that felt in our nostrils on inspiration. It was observed that our breath did not feel cool to our fingers unless held very near the mouth; at a distance the cooling power of the breath did not sufficiently compensate the effect of putting the air in motion, especially when we breathed with force.

On going undressed into the room, the impression of the air was much more disagreeable than before; but in five or six minutes, a profuse sweat broke out, which instantly relieved me. During all the experiments of this day, whenever I tried the heat of my body, the thermometer always came very nearly to the same point (the ordinary standard), not even one degree of difference, as in our former experiments.

To prove that there was no fallacy in the degree of heat shown by the thermometer, but that the air which we breathed was capable of producing all the well-known effects of such heat on inanimate matter, we put some eggs and a beef-steak upon a tin frame, placed near the standard thermometer, and farther distant from the stove than the wall. In about thirty minutes the eggs were taken out roasted quite hard. In about forty-seven minutes the steak was not only dressed, but almost dry. Another beef-steak was rather overdone in thirty-three minutes. In the evening, when the heat was still greater, we blew upon a third steak with the bellows, which produced a visible change on its surface, and hastened its dressing; the greatest part of it was pretty well done in thirteen minutes."

The mode in which Dr Blagden ascertained, in the course of these experiments, that the internal parts of the body remained at the same temperature as the ex-

ternal, was by placing the thermometer below the tongue. We believe, however, that the proof has been carried still further by the actual abstraction of blood under similar circumstances, and that its temperature was found to be at the usual standard.

We have now adverted to some of the most remarkable points connected with the subject of animal heat. After its generation in the lungs by the chemical process described, the heat is conveyed to all parts of the frame by the blood, and the vital warmth is thus maintained throughout. Looking at the simplicity of the process by which this important object is effected, may we not repeat the words already quoted, "How shall we sufficiently admire that wisdom and skill, which, in constructing a piece of mechanism, can make the very process of removing refuse the means of working out a great and indispensable end—can by one simple chemical law at once expel a deadly poison, and maintain the warmth essential to life?"

ANECDOTES OF WOLVES.

THE wolf resembles the dog in shape, but is generally larger and more muscular, as well as more savage in appearance. The leading peculiarity of the wolf, wherever it may be found, is ferocity of disposition, accompanied with a certain degree of meanness or cowardliness, which is foreign to the character of the dog in all its varieties. It has been usual with naturalists to represent the wolf as untractable, or at least unsusceptible of attachment to man. But this is now discovered to be incorrect. The wild ferocious character of the wolf, it appears, is very much the result of the circumstances in which it is placed. Cuvier mentions the case of a young wolf which was brought up like a dog by a gentleman in France, and became familiar with every person whom it was in the habit of seeing; learned to follow like a dog, was obedient, and attached to its master in an extreme degree. This remarkable case of the taming of a wolf is given as an instance of how much may be accomplished by early culture and kindness on even the wildest and most propensious of animals.

Wolves were at one time plentiful in Britain and Ireland, but it is long since they were extirpated. They still abound in the northern parts of Europe, particularly in Russia, and are numerous in some parts of France, where they commit dreadful devastations. They are likewise common in North America, where they are black in colour, and in some instances white. In the year 1764, a wolf committed the most dreadful devastations in some particular districts of Languedoc, in the south of France, and soon became the terror of the whole country. According to the accounts given in the Paris Gazette, it was known to have killed twenty persons, chiefly women and children; and public prayers are said to have been offered up for its destruction. It seems rather strange that even at the present day, wolves are not banished from the thickly inhabited parts of France. This is apparent from the following anecdote, which we quote from a late London newspaper: —

"The winter before last, Monsieur de B., an advocate of Dijon, was returning rather late from shooting near that town, when his dog, a small pointer, who was a few paces in advance, ran suddenly back in evident alarm. The spot was a long hollow, formed by two sandbanks; and as far as his eye could reach, he could discover no cause for the animal's sudden terror, which sent him crouching to his feet. He proceeded cautiously, however, cocking both barrels of his gun; but for upwards of two hundred yards, no cause of alarm presented itself. Indeed, he had forgotten the circumstance, and rested the gun across his shoulder, when the dog again sprang behind him with an affrighted yell. A wolf stood on the sandbank, about thirty yards before him. Armed only with partridge shot, Monsieur de B. considered it most prudent to retreat, and gain a cross road in the rear. He had not returned many yards, when, to his horror and astonishment, he beheld another wolf barring his path on that side. Neither as yet ventured to attack him, and as he advanced, each retired; but the other would draw closer to his heels. His situation became critical, for night was approaching, and he feared that with it more assailants would be down upon him; and to this they both howled as if to call a reinforcement, and the sportsman at length felt certain they were answered from the hills. No time was to be lost; he rapidly advanced on one, and within twenty paces fired both barrels at him. The wolf fell wounded, and the other cleared the bank, evidently scared. Monsieur de B., following his example, took to his heels, and never drew breath till he had entered Dijon. On examining the snow next morning, it was ascertained that he had been hotly pursued to the very gates. As for the wounded wolf, a few bones were all that his comrades had left of him."

The following account of the rapacity of wolves in Russia, is given by a recent traveller, but of whose

name we are ignorant, from the manner it has come under our notice:—

"A peasant, when one day in his sledge, was pursued by eleven of those ferocious animals; at this time he was only about two miles from home, towards which he urged his horse at the very top of his speed. At the entrance to his residence was a gate, which happened to be closed at the time; but the horse dashed this open, and thus himself and his master found refuge within the courtyard. They were followed, however, by nine out of the eleven wolves; but, very fortunately, at the instant these had entered the enclosure, the gate swung back on its hinges, and thus they were caught as in a trap. From being the most ferocious of animals, the nature of these beasts, now that they found escape impossible, became completely changed: so far, indeed, from offering molestation to any one, they slunk into holes and corners, and allowed themselves to be slaughtered almost without making resistance."

The following singular adventure of General Putnam with a wolf in the state of Connecticut in North America, has been already made known in works of natural history, but may here appropriately be repeated:—

"Some time after Mr Putnam had removed to Connecticut, the wolves, which were then very numerous, broke into his sheep-fold, and killed seventy fine sheep and goats, besides worrying several lambs and kids. This dreadful havoc was committed by a she-wolf, which, with her annual whelps, had for several years infested the neighbourhood. The whelps were commonly destroyed by the vigilance of the hunters, but the old one was too sagacious to come within reach of gun-shot; and upon being closely pursued, she would generally fly to the western woods, and return the next winter with another litter of whelps.

This animal at length became such an intolerable nuisance, that Mr Putnam and five of his neighbours agreed to hunt alternately, until they could destroy her, and two of them, in rotation, were to be constantly in pursuit. It was known, that, having lost the toes from one foot, by a steel trap, she made one track shorter than the other. By this vestige the pursuers recognised, in a light snow, the route of the wolf. Having followed her to Connecticut river, and found she had turned back toward Pomfret, they immediately returned, and by ten o'clock next morning the blood-hounds had driven her into a cave about three miles distant from Mr Putnam's house. The people soon assembled with dogs, guns, straw, fire, and sulphur, to attack their common enemy, and several attempts were made to dislodge her from the den; but the hounds came back wounded and intimidated, and neither the smoke of blazing straw, nor the fumes of brimstone, could compel her to quit her retirement.

Weary with these fruitless attempts, which had continued nearly twelve hours, Mr Putnam proposed to his negro servant to go down into the cavern and shoot the wolf; and on his declining the hazardous service, the general resolved himself to destroy the ferocious animal, lest she should escape through some unknown fissure of the rock. Accordingly, having provided himself with several strips of birch bark, to light him in this darksome cave, he pulled off his coat and waistcoat, and having a long rope fastened round his body, by which he might be drawn back at a concerted signal, he entered head foremost, with the blazing torch in his hand.

The aperture of the cave, on the east side of a high ledge of rocks, is about two feet square: from thence it descends obliquely fifteen feet, and then running horizontally about ten more, it ascends sixteen feet towards its termination. The sides of this cavity consist of smooth solid rocks, which seem to have been divided from each other by an earthquake. The top and bottom are also composed of stone, and the entrance, in winter, being covered with ice, is extremely slippery. It is in no place high enough for a man to raise himself upright, nor in any part more than three feet broad.

Mr Putnam having groped his passage to the horizontal part of the cavern, the most terrifying darkness appeared in front of the dim circle of light afforded by his torch, and all was silent as the house of death. Cautiously proceeding onward, he came to the ascent, which he slowly mounted on his hands and knees, till he discovered the glaring eye-balls of the wolf, who was sitting at the extremity of the den. Startled at the sight of fire, she gnashed her teeth and gave a sullen growl, upon which the general kicked the rope, as a signal for pulling him out. The people at the mouth of the cave hearing the growling of the wolf, and imagining their friend to be in the most imminent danger, drew him out with such celerity, that his shirt was stripped over his head, and his skin severely lacerated. However, he boldly persisted in his resolution, and having adjusted his clothes, and loaded his gun with buck-shot, he descended a second time. On his second approach, the wolf assumed a very fierce and terrible countenance, howling, rolling her eyes, snapping her teeth, and dropping her head between her legs; but when she was on the very point of springing on him, Mr Putnam fired at her head, and was immediately drawn out of the cave. After refreshing himself, and permitting the smoke to dissipate, he went down again, and on applying his torch to the animal's nose, found her dead; then taking hold of her ears, and kicking the rope, he drew her forth, to the astonishment of all the spectators."

GAS ATMOSPHERE.

From my own experience, says Mr Rutter, in a communication to the *Mechanics' Magazine*, I am decidedly of opinion that coal-gas, when largely diluted with air, is not so unwholesome as some people would try to make us believe. Scarcely a day passes that I do not respire in a vivified atmosphere of this kind, and I have been in the daily habit of doing so for many months, but I have never experienced the slightest inconvenience from it. The men engaged at the gas-works here (Lymington) necessarily respire considerable quantities of gas every day, but they are in better health than they were before they entered upon the employment, two of them having literally grown fat.

THE POET'S BRIDAL-DAY SONG.

[BY ALLAN CUNNINGHAM.]

O! my love's like the steadfast sun,
Or streams that deepen as they run;
Nor hoary hairs, nor forty years,
Nor moments between sighs and tears—
Nor nights of thought, nor days of pain,
Nor dreams of glory dreamed in vain—
Nor mirth, nor sweetest song which flows
To sober joys and soften woes,
Can make my heart or fancy flee
One moment, my sweet wife, from thee!
Even while I muse, I see the sit
In maiden bloom and matron wit—
Fair, gentle as when first I sued,
Ye seem, but of sedater mood;
Yet my heart leaps as fond for thee
As when, beneath Arbigland tree,
We stayed and wood, and thought the moon
Set on the sea an hour too soon;
Or lingered 'mid the falling dew,
When looks were fond and words were few.
Though I see smiling at thy feet
Five sons and as fair daughter sweet;
And time and care and birth-time woes
Have dimmed thine eye, and touched thy rose;
To thee and thoughts of thee belong
All that charms me of tale or song;
When words come down like dew unsought
With gleams of deep enthusiast thought,
And fancy in her heaven flies free—
They come, my love, they come from thee.
O, when more thought we gave of old
To silver than some give to gold;
'Twas sweet to sit and ponder o'er
What things should deck our humble bower!
'Twas sweet to pull, in hope, with thee
The golden fruit from Fortune's tree;
And sweeter still to choose and twine
A garland for these locks of thine—
A song-wreath which may grace my Jean,
While rivers flow and woods are green.
At times there come, as come there ought,
Grave moments of sedater thought—
When fortune frowns, nor lends our night
One gleam of her inconstant light;
And hope, that decks the peasant's bower,
Shines like the rainbow through the shower:
O then I sec, while seated nigh,
A mother's heart shine in thine eye;
And proud resolve and purpose meek,
Speak of thee more than words can speak:—
I think the wedded wife of mine
The best of all that's not divine!

—From a *Scrap-Book*.

THE OLD WOMAN AND THE CLEW.

During the times when women were prosecuted in England for witchcraft, the following case occurred:—"An eminent English judge was travelling the circuit, when an old woman was brought before him for using a spell to cure dimness of sight, by hanging a clew of yarn round the neck of the patient. Marvellous things were told by the witnesses, of the cures which this spell had performed on patients far beyond the reach of ordinary medicine.

The poor woman made no other defence than by protesting, that if there was any witchcraft in the ball of yarn, she knew nothing of it. It had been given her, she said, thirty years before, by a young Oxford student, for the cure of one of her own family, who having used it with advantage, she had seen no harm in lending it for the relief of others who laboured under a similar infirmity, or in accepting a small gratuity for doing so. Her defence was little attended to by the jury, but the judge was much agitated. He asked the woman where she resided when she obtained possession of this valuable relic. She gave the name of a village, in which she had in former times kept a petty alehouse. He then looked at the clew very earnestly, and at length addressed the jury. 'Gentlemen,' he said, 'we are on the point of committing a great injustice to this poor old woman; and, to prevent it, I must publicly confess a piece of early folly, which does me no honour. At the time this poor creature speaks of, I was at college, leading an idle and careless life, which, had I not been given grace to correct it, must have made it highly improbable that ever I should have attained my present situation. I chanced to remain for a day and night in this woman's alehouse, without having money to discharge my reckoning. Not knowing what to do, and seeing her much occupied with a child who had weak eyes, I had the meanness to pretend that I could write out a spell that would mend her daughter's sight, if she would accept it instead of her bill. The ignorant woman readily agreed; and I scrawled some figures on a piece of parchment, and added two lines of nonsensical doggerel, in ridicule of her credulity, and caused her to make it up in that clew which has so nearly cost her her life. To prove the truth of it, let the yarn be unwound, and you may judge of the efficacy of the spell.' The clew was unwound accordingly, when the couplet mentioned by the judge was found in it, written on a bit of parchment." The woman was of course liberated.—*Scott's Demonology.*

NAPOLEON'S IDEAS OF DISTINCTION.

Bonaparte possessed a mind which despised the paltriness of title, but he well knew the weakness of the mass of mankind, and the necessity for keeping them in good humour by dispensing empty honours to them. His money treasury was often empty, but his treasury of crosses of the Legion of Honour was inexhaustible, and that frequently served him in good stead. It is mentioned that, on instituting the Legion of Honour, he vented the following remarks:—"Distinctions are the baubles of kings, and baubles are the leading-strings by which mankind are moved at will. A crown is too heavy a burthen for a weak head, and a sceptre in unskilful hands is always ready to slip out of them. Wars, and the cares which a throne brings, require not merely a good head and a stout heart, but the possession of little feeling. Glory is not to be acquired otherwise than at the expense of painful acts, and even measures which are revolting to humanity." It will be admitted that, in this respect, Napoleon's experience was a tree of knowledge!

A DISCOVERY BY ACCIDENT.

The chief discoveries in the arts have been made by accident, not from forethought or a deep knowledge of the principles in nature. It is related that the discovery of glass-making was effected by seeing the sand vitrified on which a fire had been kindled. The discovery of the manufacture of plate-glass is said to have been equally accidental. Blançourt relates, as the mode in which the casting of plate-glass was discovered, that a person who was melting some of this material in a crucible, accidentally split it, while fluid, upon the ground. The metal ran under one of the large flag stones wherewith the place was paved, which obliged the workman to take up the stone in order to recover the glass. He then found it in the form of a plate, such as could not be produced by the ordinary process of blowing. The man's attention being roused by this fact, he was unable to sleep, and conceiving at once the superiority of this method for forming mirrors, he immediately commenced experimenting, and before the day appeared, had proved the practicability of the improvement which the purest chance had thus placed within the sphere of his observation.

MEDICAL PROPERTY OF THE CAT.

The following account of a very strange sort of plaster appears in Lloyd's Field Sports of the North of Europe:—"In general, sportsmen entertain a dislike to cats, because they destroy much game; but circumstances likewise occur, which remind mortals that every thing is good which God has created. For example; it happened that a young sportsman of fifteen years old, whom I still know well, had got a dreadful pain in his left knee, and, by a contraction of the sinews, was forced to use crutches, and the doctors had given their sentence that this would be his fate through life. Some one had heard the officers who were in the Pomeranian war of 1757, relate, that soldiers who from fatigue had got pain in the sinews, had used dog and calf skins just taken off and warm, which had given them ease; an idea was therefore started, that the cat, which is of a still warmer nature, would be more serviceable, especially if the whole cat was used. The hard sentence and intolerable pain made him determine to make every possible attempt to obtain a cure or alleviation. The patient therefore removed out into a tent, had a cat's head cut off, ripped open the body, and with intestines and all, laid it round his knee, and fastened it with several handkerchiefs. When it had remained for twenty-four hours, the knee got more supple; the next day the leg could be stretched out altogether, and a hole broke out of itself, in the dreadful swelling, from which much matter ran out. The third day the cat was removed. The patient dressed himself and went, without stick or crutch, up to his parents and some strangers, who with joy beheld the miracle. All the pores on which the cat lay, appeared to have opened; and the cat had nearly turned into putrefaction, so that others could with difficulty approach the tent. The cure was effected in 1772. The old patient is still alive, and has, at seventy years of age, and after terrible fatigues, both as a soldier and a sportsman, never had the smallest pain in that knee."

VITALITY OF BULBOS ROOTS.

The vital principle is almost unextinguishable both in seeds and the roots of various kinds of plants. It is an extraordinary fact, but well attested, that a bulbous root, which was found in the hand of an Egyptian mummy, and probably more than 2000 years old, germinated when exposed to the atmosphere, though, when discovered, it was apparently dry and dead. When put into the ground, it grew with readiness and vigour.

NEW KIND OF STEAM-ENGINE.

In our late account of this engine, now in operation in the premises of Mr Ruthven, Edinburgh, we committed a few slight errors of detail, which we take the earliest opportunity of correcting.—The arms of the machine are five feet long, five and a half inches broad, and are sharp at both edges. The apertures in the ends are each nearly a quarter of an inch in diameter. The iron case in which the arms revolve, is six feet two inches in diameter, and there is little condensation of steam in the case. The adding of power to the engine is not by means of centrifugal force, but by increasing the amount of steam and enlarging the apertures. The same pressure of steam in the boiler, and quantity supplied, give the same power to the arms whatever length they be. In this engine, as in every other, power is produced from the steam in proportion to the size of the boiler and pressure of steam, with this important advantage, that in this rotary engine it may be conceived that all, or very nearly all, the power of the steam is gained, while in other engines, four-tenths of the power are admitted to be lost, from the friction of parts.—We are glad to learn that the account we gave, has had the effect of turning the attention of the public to the subject, which will now be better understood by these explanations.

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